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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,309

12/11/2006

George Coulter Kennedy

SPI-01

7162

23508 7590 12/23/2010
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EXAMINER

DIAZ, THOMAS C

ART UNIT

PAPER NUMBER

3656

NOTIFICATION DATE

DELIVERY MODE

12/23/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/595,309	Applicant(s) KENNEDY ET AL.	
	Examiner THOMAS DIAZ	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2010 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The amendment filed 10/21/2010 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The drawings submitted on 10/21/2010 introduce new matter since they include too many details and dimensions which were not previously recited in the specification. It is recommended to cancel these drawings and also cancel claim 7 in order to avoid another drawing objection.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 17, the claim is written in a generally narrative form and it is unclear what is being positively recited in the claim and what are merely functional limitations.

For example, claim 17 recites "each having a fluid end recess and a power end recess

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on an inner surface of each clamping member dimensioned and arranged along an axis of the components such that a portion of each component is gripped and held within each of the recesses when the clamping members are brought together by a tensioning device located orthogonal to the axis of the components." It is unclear what is being positively claimed here since the entire statement is conditional and dependent on the condition of "when the clamping members are brought together..." Are the clamping members already brought together? It is there for unclear whether this condition is occurring and it would be unclear whether the tensioning device is being positively claimed. The claim recites Examiner recommends that perhaps writing the claims in accordance with 37 CFR 1.75(i) would add clarity.

Claim 19 recites the same conditional statement.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-16 and claims 17, 19, 20, 22, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Kennedy et al. (USP 5904071).

Regarding claim 1, USP '071 discloses a piston rod assembly for coupling between a power end and a fluid end of a high pressure reciprocating pump, the assembly comprising one or more clamping members (fig.1, 12) arranged relative to a

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rod axis (axis defined orthogonal to a longitudinal axis which passes thru the respective ends) between the power end (fig.1, 10) and the fluid end (fig.1, 11), each member having a first end adapted to grip the power end component, and a second end adapted to grip the fluid end component (see fig.1), and at least one member including one or more tensioning devices (fig.1, 16 and 21), wherein said tensioning device comprises a piston (fig.1, 16 and 21) to provide a load in said tensioning device orthogonal to said rod axis and thereby secure said components against release.

Regarding claim 2, USP '071 discloses the clamping members are part cylindrical bodies which when arranged on the rod axis provide a substantially cylindrical body (see fig.1).

Regarding claim 3, USP '071 discloses there are two clamping members, an upper clamping member and a lower clamping member (half of clamping member that has one piston and the other that contains the other piston, 15 and 21).

Regarding claim 4, USP '071 discloses the first and second ends include a contact face (see fig.1, there exist contact faces which are parallel to the axis on the inner surface of the rods) parallel to the rod axis on an inner surface.

Regarding claim 5, USP '071 discloses each face provides a recess (either the recess formed for 24 or the recesses for 15,20) on the inner surface in which a portion of the power end component or fluid end component is located such that the component is gripped and held when the clamping members are brought together by the tensioning device.

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Regarding claim 6, each component end and the first/second end provide a knuckle joint (see fig.1, the joints are of a knuckle type joint).

Regarding claim 8, each piston is slideable within an hydraulic cylinder (see fig.1, cylinder is formed by clamping members).

Regarding claim 9, each piston includes at least one stem (fig.1, stem portion which slides within 15 and 20) [adapted to receive a nut or a lock] (They are capable of receiving a nut or lock).

Regarding the functional recitation(s) in the claim(s) above denoted by the “[]” the examiner notes while features of an apparatus may be recited either structurally or functionally, claims directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. The reference discloses all the claimed structural limitations and therefore anticipates the claim. See MPEP 2114. Additionally, the apparatus is capable of performing the claimed functions.

Regarding claim 10, each piston includes at least one stem [adapted to receive a nut or a lock;] each stem extends from one clamping member through an aperture in an adjacent clamping member, and wherein a nut engages the stem to couple the clamping members (the stem 18 extends from one side of the clamping member to another and connects to a nut member).

Regarding claim 11, a spring (fig.1, 23) is arranged within the hydraulic cylinder to tension the said stem.

Regarding claim 12, the assembly includes non-rotational arrangement (fig.6, 75) for preventing rotation of said stem.

Regarding claim 13, the non-rotational arrangement is a pin (fig.6, 75) locating in a matching recess arranged parallel to the stem.

Regarding claim 14, a space (fig.1, 2) is defined between a base of the cylinder (located at the port 27) and a base of the piston for accommodating hydraulic fluid.

Regarding claim 15, the assembly includes a fluid inlet port (fig.1, 27) to permit the input of hydraulic fluid to the cylinder.

Regarding claim 16, a chamber (fig.1, 2) is included in the/each member to provide a common feed for hydraulic fluid to all cylinders within the member.

Regarding claim 17, Kennedy discloses a piston rod assembly for coupling between a power end component and a fluid end component of a high pressure reciprocating pump, the assembly comprising an upper clamping member and a lower clamping member (half of clamping member that has one piston and the other that contains the other piston, 15 and 21) each having a fluid end recess and a power end recess on an inner surface of each clamping member dimensioned and arranged along an axis of the components (axis defined orthogonal to a longitudinal axis which passes thru the respective ends) [such that a portion of each component (10,11) is gripped and held within each of the recesses when the clamping members are brought together by a tensioning device located orthogonal to the axis of the components.]

Regarding claim 19, Kennedy discloses wherein the tensioning device includes a least one spring (fig.1, 23) arranged to bring the upper and lower clamping members in shear *when the clamping members are brought together by the tensioning device.*

Regarding claim 20, Kennedy discloses the spring comprises a disc spring, a disk spring stack, a spring stack, an elastic member, or a combination thereof (see fig.1).

Regarding claim 22, Kennedy discloses the fluid end recess and/or the power end recess include a bearing pad (either the area in the pockets arranged in the recess or material of the power end and clamping members can read on this limitation since the amount of "give" is not precisely defined) comprising a material having an elastic modulus suitable to provide give between the assembly and the power end component and/or the fluid end component when the component is gripped and held within the recess.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Aday et al. (USP 6554523).

Regarding claim 1, Aday et al. discloses a piston rod assembly for coupling between a power end and a fluid end of a high pressure reciprocating pump, the assembly comprising one or more clamping members (12) arranged relative to a rod axis (axis defined either longitudinally or vertically) between the power end (fig.1, 10) and the fluid end (fig.1, 11), each member having a first end adapted to grip the power end component, and a second end adapted to grip the fluid end component (see fig.1), and at least one member including one or more tensioning devices (18 or 14 or 13), wherein said tensioning device comprises a piston (14) to provide a load in said tensioning device orthogonal to said rod axis and thereby secure said components against release (if the axis is selected to be longitudinal then this piston has at least a

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component of a load acting orthogonally and if the axis is chosen vertically it will also have a component acting orthogonally).

Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Labyer et al. (USP 4033701).

Regarding claim 17, Labyer et al. discloses a piston rod assembly for coupling between a power end component (12) and a fluid end component (20) of a high pressure reciprocating pump, the assembly comprising an upper clamping member (68) and a lower clamping member (70) each having a fluid end recess and a power end recess on an inner surface of each clamping member (see fig.1) dimensioned and arranged along an axis of the components (the axis can be defined for example longitudinally or vertically) [such that a portion of each component is gripped and held within each of the recesses when the clamping members are brought together by a tensioning device located orthogonal to the axis of the components.] (device is capable of such a function, see fig.2. the tensioning device being the bolts)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al. (USP 5904071).

Regarding claim 7, USP '071 discloses the claimed invention except for explicitly disclosing each component end and the first/second end provide a ball and socket. It would have been an obvious matter of design choice to use a ball and socket joint instead of a knuckle joint, since applicant has not disclosed that a ball and socket joint solves any stated problem or is for any particular purpose and it appears the invention would perform equally with the knuckle joint.

Allowable Subject Matter

Claims 18 and 21 would be allowable if rewritten to overcome the rejection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Note in the new grounds of rejection with the Kennedy reference the axis has been redefined and as a result the prior art reads on the claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS DIAZ whose telephone number is (571)270-5461. The examiner can normally be reached on Monday-Friday 8:30am to 5:00pm..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Diaz/
Examiner, Art Unit 3656

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3656